

CLAIMS

I claim:

1. A tool holding system for selectively retaining a tool by clamping a handle of the tool, the system comprising:

a mounting assembly for selectively coupling said system to a vertical surface of a structure;

a first jaw assembly operationally coupled to said mounting assembly, said first jaw assembly being adapted for abutting a first side of the handle of the tool being retained; and

a second jaw assembly pivotally coupled to said mounting assembly, said second jaw assembly being adapted for abutting a second side of the handle of the tool being retained, the handle being selectively retained between said first jaw assembly and said second jaw assembly.

2. The system of claim 1, wherein said mounting assembly further comprises:

a first mounting member having a first flange portion and a first horizontal support portion, said first flange portion being for abutting the vertical surface of the structure, said first horizontal support portion being coupled to said first flange portion, said first flange portion having a top surface defining a plane, said first horizontal support portion having a first surface defining a first horizontal plane, said first horizontal portion being positioned such that said first horizontal plane being substantially perpendicular to said plane formed by said top surface; and

a second mounting member having a second flange portion and a second horizontal support portion, said second flange portion being for abutting the vertical surface of the structure, said second

horizontal support portion being coupled to said second flange portion, said second flange portion having a second top surface defining a second plane, said second horizontal support portion having a second surface defining a second horizontal plane, said second horizontal portion being positioned such that said second horizontal plane being substantially perpendicular to said second plane formed by said second top surface.

3. The system of claim 2, further comprising:

said first flange portion having an aperture extending therethrough, said aperture facilitating coupled said first flange portion to the surface of the structure; and

said second flange portion having a second aperture extending therethrough, said second aperture facilitating coupling said second flange portion to the surface of the structure.

4. The system of claim 2, further comprising:

said first horizontal support portion having a proximal end and a distal end, said proximal end being adjacent to said first flange portion, said distal end being adjacent to said first jaw assembly, said first horizontal support portion having a taper extending from a medial portion towards said distal end, said distal end having a width less than a width associated with said medial portion, said taper permitting pivoting of said second jaw assembly with respect to said mounting assembly; and

said second horizontal support portion having a proximal end and a distal end, said proximal end being adjacent to said second flange portion, said distal end being adjacent to said first jaw assembly, said second horizontal support portion having a taper extending from a medial portion towards said distal end, said distal

end having a width less than a width associated with said medial portion, said taper permitting pivoting of said second jaw assembly with respect to said mounting assembly.

5. The system of claim 2, wherein said first horizontal support portion having a forward edge and a rearward edge, said forward edge being proximal to said first jaw assembly, said rearward edge being opposite said forward edge, said first horizontal support portion having a top edge, said top edge having a notch positioned therein adjacent to said forward edge, said notch having a vertical portion, said vertical portion being positioned in said first horizontal support portion at an angle which said second jaw assembly strikes said vertical portion when pivoted to a predetermined position whereby pivotal movement of said second jaw assembly relative to said mounting assembly is limited.

6. The system of claim 2, further comprising:

wherein said first horizontal support portion having a forward edge and a rearward edge, said forward edge being proximal to said first jaw assembly, said rearward edge being opposite said forward edge, said first horizontal support portion having a top edge, said top edge having a notch positioned therein adjacent to said forward edge, said notch having a vertical portion, said vertical portion being positioned in said first horizontal support portion at an angle which said second jaw assembly strikes said vertical portion when pivoted to a predetermined position whereby pivotal movement of said second jaw assembly relative to said mounting assembly is limited; and

wherein said second horizontal support portion having a second forward edge and a second rearward edge, said second

forward edge being proximal to said first jaw assembly, said second rearward edge being opposite said second forward edge, said second horizontal support portion having a second top edge, said second top edge having a second notch positioned therein adjacent to said second forward edge, said second notch having a second vertical portion, said second vertical portion being positioned in said second horizontal support portion at an angle which said second jaw assembly strikes said second vertical portion when pivoted to a predetermined position whereby pivotal movement of said second jaw assembly relative to said mounting assembly is limited

7. The system of claim 1, wherein said first jaw assembly further comprises a horizontal portion and a vertical portion, said horizontal portion being operationally coupled to said mounting assembly, said vertical portion being operationally coupled to said horizontal portion, said horizontal and vertical portions being for abutting the handle to the tool being retained.

8. The system of claim 7, wherein said mounting assembly has an angular notch positioned therein for receiving said horizontal portion and said vertical portion of said first jaw assembly, said angular notch increasing a surface area of contact between said mounting assembly and said first jaw assembly to strengthen a union of said mounting assembly and said first jaw assembly.

9. The system of claim 8, wherein said angular notch being positioned in said mounting assembly such that a first portion of said angular notch has an axis oriented approximately fifteen degrees from vertical, said angular notch having a second portion

positioned at a right angle to said first portion of said angular notch.

10. The system of claim 1, wherein said second jaw assembly further comprises:

- a coupling portion pivotally couplable to said mounting assembly;

- a lever portion coupled to said coupling portion, said lever portion extending downwardly from said coupling portion, said lever portion providing a clamping force for retaining the handle of the tool;

- a width adjustment portion slidably coupled to said lever portion, said width adjustment portion facilitating adjustment of said second jaw assembly to accommodate a diameter of the handle of the tool being retained; and

- a retaining assembly for slideably coupling said width adjustment portion to said lever portion.

11. A tool holding system for selectively retaining a tool by clamping a handle of the tool, the system comprising:

- a mounting assembly for selectively coupling said system to a vertical surface of a structure;

- a first jaw assembly operationally coupled to said mounting assembly, said first jaw assembly being adapted for abutting a first side of the handle of the tool being retained;

- a second jaw assembly pivotally coupled to said mounting assembly, said second jaw assembly being adapted for abutting a second side of the handle of the tool being retained, the handle being selectively retained between said first jaw assembly and said second jaw assembly;

wherein said mounting assembly further comprises:

a first mounting member having a first flange portion and a first horizontal support portion, said first flange portion being for abutting the vertical surface of the structure, said first horizontal support portion being coupled to said first flange portion, said first flange portion having a top surface defining a plane, said first horizontal support portion having a first surface defining a first horizontal plane, said first horizontal portion being positioned such that said first horizontal plane being substantially perpendicular to said plane formed by said top surface;

a second mounting member having a second flange portion and a second horizontal support portion, said second flange portion being for abutting the vertical surface of the structure, said second horizontal support portion being coupled to said second flange portion, said second flange portion having a second top surface defining a second plane, said second horizontal support portion having a second surface defining a second horizontal plane, said second horizontal portion being positioned such that said second horizontal plane being substantially perpendicular to said second plane formed by said second top surface;

said first flange portion having an aperture extending therethrough, said aperture facilitating coupled said first flange portion to the surface of the structure;

said second flange portion having a second aperture extending therethrough, said second aperture facilitating coupling said second flange portion to the surface of the structure;

said first horizontal support portion having a proximal end and a distal end, said proximal end being adjacent to said first flange portion, said distal end being adjacent to said first jaw assembly, said first horizontal support portion having a taper extending from a medial portion towards said distal end, said distal end having a width less than a width associated with said medial portion, said taper permitting pivoting of said second jaw assembly with respect to said mounting assembly;

said second horizontal support portion having a proximal end and a distal end, said proximal end being adjacent to said second flange portion, said distal end being adjacent to said first jaw assembly, said second horizontal support portion having a taper extending from a medial portion towards said distal end, said distal end having a width less than a width associated with said medial portion, said taper permitting pivoting of said second jaw assembly with respect to said mounting assembly;

wherein said first jaw assembly further comprises a horizontal portion and a vertical portion, said horizontal portion being operationally coupled to said mounting assembly, said vertical portion being operationally coupled to said horizontal portion, said horizontal and vertical portions being for abutting the handle to the tool being retained;

wherein said second jaw assembly further comprises:

a coupling portion pivotally couplable to said mounting assembly;

a lever portion coupled to said coupling portion, said lever portion extending downwardly from said coupling portion, said lever portion providing a clamping force for retaining the handle of the tool;

a width adjustment portion slidably coupled to said lever portion, said width adjustment portion facilitating adjustment of said second jaw assembly to accommodate a diameter of the handle of the tool being retained; and a retaining assembly for slideably coupling said width adjustment portion to said lever portion.

12. The system of claim 11, wherein said coupling portion further comprises:

a horizontal member extending between said first support portion and said second support portion;

a first tab portion extending rearwardly from said horizontal member adjacent to said first support portion, said first tab portion facilitating pivotal coupling of said second jaw assembly to said mounting assembly; and

a second tab portion extending rearwardly from said horizontal member adjacent to said second support portion, said second tab portion facilitating pivotal coupling of said second jaw assembly to said mounting assembly.

13. The system of claim 12, further comprising:

a first coupling hole extending through said first support portion;

a second coupling hole extending through said first tab portion, said second coupling hole being aligned with said first coupling hole;

a coupling means positioned through said first coupling hole and said second coupling hole, said coupling means permitting pivotal movement of said second jaw assembly with respect to said mounting assembly;

a third coupling hole extending through said second support portion;

a fourth coupling hole extending through said second tab portion, said fourth coupling hole being aligned with said third coupling hole;

a second coupling means positioned through said third coupling hole and said fourth coupling hole, said second coupling means permitting pivotal movement of said second jaw assembly with respect to said mounting assembly.

14. The system of claim 13, wherein said coupling means and said second coupling means further comprise a single bolt extending through said first, second, third and fourth coupling holes, said bolt being secured with an associated nut.

15. The system of claim 13, wherein said coupling means and said second coupling means further comprises a single pin extending through said first, second, third, and fourth coupling holes, said pin being secured with a cotter pin.

16. The system of claim 13, wherein said coupling means and said second coupling means further comprises a single pin extending through said first, second, third, and fourth coupling holes, said pin being secured with a grip ring.

17. The system of claim 13, wherein said second hole being offset from a center of said first tab portion and said fourth hole being offset from a center of said second tab portion.

18. The system of claim 13, further comprising at least one biasing member coupled between said second jaw assembly and said mounting assembly, said biasing member urging said second jaw member towards a closed portion whereby the handle of the tool is retained.

19. The system of claim 13, further comprising a pair of biasing members, each one of said biasing members being operationally coupled between said second jaw assembly and said mounting assembly, each one of said pair of biasing members urging said second jaw member towards a closed portion whereby the handle of the tool is retained.

20. The system of claim 13, further comprising a first, second and third biasing member, each one of said first, second, and third biasing members being operationally coupled between said second jaw assembly and said mounting assembly, each one of said first, second, and third biasing members urging said second jaw member towards a closed portion whereby the handle of the tool is retained.

21. The system of claim 20, further comprising:

said first biasing member being a spring having seven coils, said first biasing member being adjacent to said first horizontal support portion;

said second biasing member being a spring having seven coils, said second biasing member being adjacent to said second horizontal support portion; and

said third biasing member being a spring having five coils, said third biasing member being positioned between said first biasing member and said second biasing member.

22. The system of claim 11, further comprising:
wherein said coupling portion further comprises:
a horizontal member extending between said first support portion and said second support portion;
a first tab portion extending rearwardly from said horizontal member adjacent to said first support portion, said first tab portion facilitating pivotal coupling of said second jaw assembly to said mounting assembly;
a second tab portion extending rearwardly from said horizontal member adjacent to said second support portion, said second tab portion facilitating pivotal coupling of said second jaw assembly to said mounting assembly;
a first coupling hole extending through said first support portion;
a second coupling hole extending through said first tab portion, said second coupling hole being aligned with said first coupling hole;
a third coupling hole extending through said second support portion;
a fourth coupling hole extending through said second tab portion, said fourth coupling hole being aligned with said third coupling hole;
a single bolt extending through said first, second, third and fourth coupling holes, said bolt being secured with an associated nut; and
a pair of biasing members, each one of said biasing members being operationally coupled between said second jaw assembly and said mounting assembly, each one of said pair of biasing members

urging said second jaw member towards a closed portion whereby the handle of the tool is retained.

23. The system of claim 22, wherein each one of said first and second tab portions further comprise a tapered edge extending along said first jaw assembly said tapered edge abutting said first jaw assembly when said second jaw assembly is pivoted to a maximum open portion, said tapered edge being a stop for said second jaw assembly.

24. The system of claim 11, wherein said lever portion further comprises:

a first extent coupled to said coupling portion, said first extent extending downwardly from said coupling portion, said first extent defining a maximum width between said first jaw assembly and said second jaw assembly;

a second extent having an angular relationship to said first extent, said second extent being coupled to said first extent; and

a third extent extending downwardly from said second extent, said third extent abutting the surface of the structure when said second jaw assembly is in a closed portion, said third extent providing a handle to be grasped by the user to facilitate removal of the tool being retained from the system.

25. The system of claim 24, wherein said first extent tapers inwardly as it extends away from said coupling portion towards said second extent, said first extent having a first width adjacent to said coupling portion, said first extent having a second width adjacent to said second extent, said first width being greater than said second width.

26. The system of claim 24, wherein said retaining assembly further comprises:

a first retaining extent being substantially parallel to said second extent of said lever portion; and

a second retaining extent being substantially parallel to said third extent of said lever portion, said second retaining extent being slidable along said third extent whereby a width of said second jaw assembly is adjustable.

27. The system of claim 26, further comprising:

a lever aperture extending through said third extent of said lever portion;

a slot extending along a longitudinal axis of said second retaining extent;

a retaining member extending through said slot and said lever aperture; and

a tensioning member couplable to said retaining member for selectively securing said width adjustment portion to said lever portion.

28. The system of claim 11, further comprising:

wherein said lever portion further comprises:

a first extent coupled to said coupling portion, said first extent extending downwardly from said coupling portion, said first extent defining a maximum width between said first jaw assembly and said second jaw assembly;

a second extent having an angular relationship to said first extent, said second extent being coupled to said first extent;

a third extent extending downwardly from said second extent, said third extent abutting the surface of the structure when said second jaw assembly is in a closed portion, said third extent providing a handle to be grasped by the user to facilitate removal of the tool being retained from the system;

wherein said width adjustment portion further comprises:

a first retaining extent being substantially parallel to said second extent of said lever portion;

a second retaining extent being substantially parallel to said third extent of said lever portion, said second retaining extent being slidable along said third extent whereby a width of said second jaw assembly is adjustable;

a lever aperture extending through said third extent of said lever portion;

a slot extending along a longitudinal axis of said second retaining extent;

a retaining member extending through said slot and said lever aperture; and

a tensioning member couplable to said retaining member for selectively securing said width adjustment portion to said lever portion.

29. The system of claim 11, further comprising:

wherein said coupling portion further comprises:

a horizontal member extending between said first support portion and said second support portion;

a first tab portion extending rearwardly from said horizontal member adjacent to said first support portion, said first tab portion facilitating pivotal coupling of said second jaw assembly to said mounting assembly;

a second tab portion extending rearwardly from said horizontal member adjacent to said second support portion, said second tab portion facilitating pivotal coupling of said second jaw assembly to said mounting assembly;

a first coupling hole extending through said first support portion;

a second coupling hole extending through said first tab portion, said second coupling hole being aligned with said first coupling hole;

a third coupling hole extending through said second support portion;

a fourth coupling hole extending through said second tab portion, said fourth coupling hole being aligned with said third coupling hole;

a single bolt extending through said first, second, third and fourth coupling holes, said bolt being secured with an associated nut;

a pair of biasing members, each one of said biasing members being operationally coupled between said second jaw assembly and said mounting assembly, each one of said pair of biasing members urging said second jaw member towards a closed position whereby the handle of the tool is retained;

wherein each one of said first and second tab portions further comprise a tapered edge extending along said first jaw assembly said tapered edge abutting said first jaw assembly when said second

jaw assembly is pivoted to a maximum open portion, said tapered edge being a stop for said second jaw assembly;

wherein said lever portion further comprises:

- a first extent coupled to said coupling portion, said first extent extending downwardly from said coupling portion, said first extent defining a maximum width between said first jaw assembly and said retaining member of said second jaw assembly;
- a second extent having an angular relationship to said first extent, said second extent being coupled to said first extent;
- a third extent extending downwardly from said second extent, said third extent abutting the surface of the structure when said second jaw assembly is in a closed portion, said third extent providing a handle to be grasped by the user to facilitate removal of the tool being retained from the system;

wherein said width adjustment portion further comprises:

- a first retaining extent being substantially parallel to said second extent of said lever portion;
- a second retaining extent being substantially parallel to said third extent of said lever portion, said second retaining extent being slidable along said third extent whereby a width of said second jaw assembly is adjustable;
- a lever aperture extending through said third extent of said lever portion;
- a slot extending along a longitudinal axis of said second retaining extent;
- a retaining member extending through said slot and said lever aperture; and

a tensioning member couplable to said retaining member for selectively securing said width adjustment portion to said lever portion.